remained at lower abundance than expected; this may be due to stock-recruit effects whereby the stocks are so low that they are unable to exploit habitat that becomes available. Striped bass midwater trawl index and survival index (not shown) for 1992-1994 fell more or less on the same line as before 1992.

Reference

Jassby, A.D., W.J. Kimmerer, S.G. Monismith, C. Armor, J.E. Cloern, T.M. Powell, J.R. Schubel, and T.J. Vendlinski. 1995. Isohaline position as a habitat indicator for estuarine populations. Ecological Applications 5:272-289.

Phytoplankton Biomass and Community Composition

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Upstream of Suisun Bay, in the delta, chlorophyll *a* concentrations were consistently low in 1995 compared with previous years. High streamflows flushed phytoplankton out of the upstream region and reduced monthly average concentrations to between 0.5 and 6 µg/L (Figure 1). Although these concentrations were low, they were within 1 standard deviation unit from the long-term mean. Monthly average concentrations peaked in July and August in conjunction with increased residence time, water temperature, and solar irradiance. Among sites, the maximum chlorophyll *a* concentration of 26 µg/L was measured in July in the Mokelumne River in association with abundance of the long-chain diatom *Melosira granulata*. Low average chlorophyll *a* concentrations in the upstream region were probably a function of low concentrations in the southern delta, where concentrations can reach up to 300 µg/L, but in 1995 only reached 15-18 µg/L.

In Suisun Bay, monthly average chlorophyll *a* concentrations remained below 4 µg/L in 1995, as has been common since 1987 (Figure 1). These low concentrations were within 1 standard deviation of the long-term mean. Slightly higher concentrations in April and May may be a function of decreased benthic grazing by *Potamocorbula amurensis*, which may have reduced numbers in Suisun Bay during wet years (see page 17). These higher concentrations may also be a function of increased downstream transport of freshwater phytoplankton. Freshwater diatoms were found as far downstream as San Pablo Bay in June.

In San Pablo Bay, the phytoplankton community was characterized by a bloom in August. Low chlorophyll *a* concentrations of 0.2 to 5 µg/L occurred throughout the year except in August, when a flagellate bloom occurred having chlorophyll *a* concentrations at 4 standard deviation units higher than the long-term mean. Phytoplankton blooms of this magnitude have not occurred in San Pablo Bay since 1987.